

**STANDARD CHLORINE CHEMICAL CO. INC. SUPERFUND SITE  
MONTHLY PROGRESS REPORT  
OCTOBER 2013**

**I. Actions Completed During the Reporting Period (October 2013)**

The soil sampling and analysis program specified in the RI/FFS Work Plan was initiated.

The monitoring well abandonment activities specified in the RI/FFS Work Plan were completed.

A field activities report with updates on activities completed at the Site was provided to the EPA on October 24, 2013.

**II. Results of Sampling and Tests and Data Received by Respondents**

Preliminary results for a portion of the samples submitted for analysis were received. Compilation and quality assurance/quality control review of the data are ongoing. Submittal of the data to the EPA will occur upon receipt all results and completion of the data quality review.

**III. Work Planned for the Next Two Months (November and December 2013)**

Monthly progress reports will be prepared and submitted to EPA.

Implementation of the RI/FFS Work Plan will continue.

Analyses of soil samples and data quality reviews will be completed.

Preparation of a Community Involvement Plan will be completed.

Preparation of the Site Characterization Summary Report Addendum will be initiated.

**IV. Problems Encountered/Anticipated Delays**

None for this Reporting Period.

**V. Operations and Maintenance Information**

Routine operations and maintenance activities were completed. A summary of operations and maintenance activities for the third quarter of 2013 is provided as Attachment A.



**ATTACHMENT A**

**OPERATIONS AND MAINTENANCE INFORMATION**

## 1.0 DESCRIPTION OF ACTIVITIES COMPLETED

### 1.1 HYDRAULIC CONTROL TREATMENT SYSTEM (HCTS)

- Continued routine HCTS operation, monitoring, inspection and reporting efforts
  - Average monthly flow for July, August and September 2013 was 19.4 gpm, 20.6 gpm and 13.0 gpm, respectively.
  - Total Volume of water treated this reporting period 2,331,270 gallons.
  - Monthly NJPDES sample collection pursuant to NJ Permit No. NJ0155438. There were no exceedences of permit monitored constituents noted during this period other than Whole Effluent Toxicity (WET) via Method 1002.0 (*Ceriodaphnia dubia*), which was reported at 56.9% reproduction. A request to amend NJPDES Permit No. NJ0155438 to reflect a more appropriate WET testing method (*Mysidopsis Bahia*) was submitted to NJDEP on July 22, 2013. Preliminary discussion between FTS and NJDEP indicated that the modification would be granted without issue, however, as a formal permit modification had not yet been received from the Agency by the later part of the third quarter (issuance date of the permit modification was September 26, 2013), and due to laboratory schedule limitations, the third quarter 2013 WET sample was submitted for analysis of *Ceriodaphnia* pursuant to permit requirements. The fourth quarter 2013 WET testing event is scheduled to be conducted using the *Mysidopsis Bahia* test method based on NJDEP's permit modification approval dated September 26 2013.
  - Hydraulic Control Wells (HCW) are operating with the exception of HCWU-2, which when inspected was found to have a faulty pump motor during the latter part of September 2013. Replacement parts were ordered for HCWU-2 but were used to replace the pump assembly at HCWU-15, which subsequently failed but typically yields more groundwater. Additional groundwater pumps and hardware were ordered for HCWU- 2, 12 and 13 following scheduled O&M inspections conducted in October 2013 which indicated failed groundwater recovery pump motors as well. Replacement parts were ordered for these wells and they are expected to be back online in early November 2013. Continued electrical issues believed to be attributed with wet conditions in the subgrade electrical pull boxes resulted in the decision to install an above ground electrical junction box. This effort was initiated during the week of September 23, 2013.

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Preventative maintenance of the HC groundwater recovery well network hardware (groundwater pump and conveyance line cleaning, level control probe cleaning and testing, and inspection of well electrical supply and control systems) continues to be conducted as needed.

- DNAPL recovery efforts continue to be conducted since system startup in January 2012. However, groundwater recovery pumps installed in DNAPL Recovery Wells (DRW) are not operating. Passive DNAPL recovery is currently the preferred recovery method as DNAPL accumulation rates in subject DNAPL Recovery Wells (DRWs) under non-pumping conditions have been significant.
- Piezometer gauging data collected during the reporting period is provided in Table 1. Water level data trends are favorable and continue to indicate progress to achieving sustained inward gradients. A graph showing historical groundwater gradient data is provided as Figure 1 of this submittal.

## 1.2 DNAPL RECOVERY

Passive DNAPL recovery efforts for the third quarter of 2013 produced 388 gallons of DNAPL from DRWL-5, DRWL-9 and DRWL-11 combined. A total of 3,764 gallons of DNAPL have been recovered from the DNAPL recovery well network since January 2012. Total DNAPL recovery to date is provided in the summary table below.

Well ID	July 2013 DNAPL Recovery (gal)	August 2013 DNAPL Recovery (gal)	September 2013 DNAPL Recovery (gal)	Total DNAPL Recovered (gal)
DRWL-9	NR	NR	54	819
DRWL-11	103	102	77	2,367
DRWL-5	NR	NR	52	265
DRWL-7	NR	NR	NR	50
DRWL-1	NR	NR	NR	208
DRWL-10	NR	NR	NR	55

- DNAPL Recovery Well Gauging data for this period are provided in Table 2.

### 1.3 NON-HCTS INSPECTIONS

- Continued post-construction and New Jersey Meadowlands Commission inspections.
  - Drainage channels were mowed and all catch basins cleared of debris in September 2013; and,
  - Fertilizer and urea application in August and September 2013 to areas previously hydroseeded to promote vegetative cover growth.

### 1.4 ADDITIONAL COMPLETED EFFORTS

- Permit modification request letter submitted to NJDEP requesting the Whole Effluent Toxicity (WET) testing method be changed from *Ceriodaphnia Dubia* to *Mysidopsis Bahia* based on SE2 classification of the Hackensack River.
- Modification of NJDEP/DSW General Permit No. NJG0175102 changing WET Toxicity testing methods and removing the requirements related to monitoring and reporting of decommissioned DSNs 002A and 003A from the permit was issued on September 26, 2013.
- IRM cover system cracks observed across the SCCC site sealed with asphalt material during the week of August 19, 2013.
- Additional herbicide applications were performed in August 2013 to address invasive species (*Phragmites*), in onsite freshwater wetland areas. These areas are being prepared for fall and spring plantings to promote the establishment of desirable native plant species.

## 2.0 PROJECTED FUTURE ACTIVITIES

### 2.1 HCTS RELATED EFFORTS

- Continued routine HCTS operations, monitoring and maintenance.
- FTS recommends that the T-PH-01 flash mix system modification be formalized with the NJDEP given the success of the testing to date. This modification routes all influent groundwater streams into T-PH-01 which now serves as the flash mix tank for the CrVI reduction treatment process. This process modification has been implemented to manage additional volume of recovered groundwater determined exhibit CrVI at

levels necessitating reduction to achieve discharge permit limits. The CR-01 and CR-02 tanks which were the first and second tank, respectively, in the CrVI reduction process, initially served as flash mix tanks. Hydraulic restrictions on the gravity flow of the CrVI reduction system would perpetually back the CR-01 and CR-02 tanks up causing high fluid level system shut downs ultimately reducing system run time. By directing total recovered groundwater flow to the T-PH-01 tank, gravity flow through the CrVI reduction process is able to achieve design flow rates, favorably improving total system run time and total gallons treated.

- Continued dewatering of electrical pull boxes to assess and repair electrical runs from HCTS building to individual HC and DR well control panels.
- Above ground electrical junction box installation to replace subgrade pull box housing multiple wire splices for power supply to groundwater recovery well network.

## **2.2 NON-HCTS RELATED EFFORTS**

- Continued routine Non-HCTS (consolidation area and IRM surface covers) inspections and maintenance as needed.
- Sheet pile barrier wall joint welding in preparation of cathodic protection system final install and startup.
- Cathodic Protection System installation completion, shake down and start-up.
- SCCC IRM Cover (asphalt and former building concrete footers) vegetation removal and asphalt crack sealing.
- Address soil erosion areas and re-vegetation issues, as necessary.
- Continue weekly and monthly inspections of surface cover systems and repair, as necessary.
- Maintain vegetative ground cover and conduct scheduled mowing of the various vegetative cover areas.
- Continued invasive species abatement program for freshwater wetland area with herbicide treatments.



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**TABLES**

Table 1

**Standard Chlorine Chemical Company  
3rd Quarter 2013 Progress Report**

**Piezometer Gauging Data Summary**

Well ID	Jul-13		Aug-13		Sep-13	
	Depth to Water (ft-TOC)	Total Depth (ft- TOC)	Depth to Water (ft-TOC)	Total Depth (ft- TOC)	Depth to Water (ft-TOC)	Total Depth (ft- TOC)
HC-PZ-1U	6.62	16.68	7.05	16.70	7.48	16.70
HC-PZ-2U	6.85	16.04	7.49	16.09	7.72	16.10
HC-PZ-3U	6.84	15.03	8.80	15.00	9.15	15.00
HC-PZ-4U	4.55	14.60	6.73	14.64	7.39	14.65
HC-PZ-6U	1.93	9.37	3.14	9.43	3.72	9.43
HC-PZ-7U	2.69	8.86	2.78	8.92	3.39	8.94
HC-PZ-8U	2.97	11.84	3.92	11.90	4.90	11.90
HC-PZ-9U	3.15	12.22	4.35	12.23	4.96	12.25
HC-PZ-10U	3.46	9.45	4.68	9.51	4.60	9.50
HC-PZ-11U	4.91	9.73	5.10	9.80	5.22	9.80
HC-PZ-12U	2.92	8.38	3.79	8.45	4.20	8.45
HC-PZ-13U	2.73	8.33	3.41	8.40	3.53	8.40
HC-PZ-14U	2.52	9.99	3.81	10.06	4.10	10.06
HC-PZ-15U	5.59	11.68	5.99	11.75	6.04	11.74
HC-PZ-1L	7.68	25.07	7.79	25.09	8.60	25.10
HC-PZ-2L	8.98	25.15	9.19	28.18	9.54	25.20
HC-PZ-3L	6.41	23.48	6.55	23.53	6.63	23.51
HC-PZ-4L	6.38	20.50	6.77	20.54	6.84	20.55
HC-PZ-6L	3.45	16.83	3.81	16.80	3.28	16.79
HC-PZ-7L	0.68	16.94	0.89	16.98	1.25	16.97
HC-PZ-8L	3.71	21.47	4.87	21.50	5.36	21.49
HC-PZ-9L	4.05	20.94	4.95	21.00	5.42	21.00
HC-PZ-10L	2.31	18.70	2.53	18.76	2.74	18.75
HC-PZ-11L	5.12	19.11	5.32	19.12	5.48	19.07
HC-PZ-12L	1.65	15.71	2.53	15.77	2.79	15.78
HC-PZ-13L	2.64	16.19	3.11	16.24	3.26	16.18
HZ-PZ-14L	2.68	18.81	3.50	18.89	3.89	18.86
SC-MW-16L	4.54	19.78	4.89	19.81	4.96	19.80



Table 2

Standard Chlorine Chemical Company  
3rd Quarter 2013 Progress Report  
DNAPL Well Gauging Data

Recovery Well ID	Jul-13				Aug-13				Sep-13			
	Depth to Water (ft TOC)	Depth to Product (ft TOC)	Product Thickness (ft)	Total Depth (ft TOC)	Depth to Water (ft TOC)	Depth to Product (ft TOC)	Product Thickness (ft)	Total Depth (ft TOC)	Depth to Water (ft TOC)	Depth to Product (ft TOC)	Product Thickness (ft)	Total Depth (ft TOC)
DRWU-1	1.52	9.35	1.28	10.63	1.52	NP	NA	10.65	1.67	9.40	1.28	10.68
DRWU-2	1.93	NP	NA	11.73	2.05	NP	NA	11.75	2.43	NP	NA	11.78
DRWU-3	11.54	22.60	Trace	22.60	11.81	22.55	0.00	22.55	12.03	22.30	0.05	22.35
DRWU-4	0.97	NP	NA	12.07	0.95	NP	NA	12.08	1.18	NP	NA	12.10
DRWU-5	-0.21	8.71	Trace	8.71	0.38	NP	NA	8.85	0.46	NP	NA	8.80
DRWL-1	3.12	28.95	2.95	31.90	3.36	28.70	3.20	31.90	3.51	28.20	3.70	31.90
DRWL-2	0.12	27.00	Trace	27.00	0.33	27.00	0.00	27.00	0.67	27.00	0.00	27.00
DRWL-3	0.47	28.75	0.10	28.85	0.81	28.75	0.10	28.85	1.01	28.75	0.10	28.85
DRWL-4	2.19	29.50	1.00	30.50	2.50	29.40	1.10	30.50	2.84	29.30	1.20	30.50
DRWL-5	1.60	25.10	4.70	29.80	1.79	28.92	0.88	29.80	2.16	28.20	1.45	29.65
DRWL-6	13.62	40.00	0.80	40.80	14.02	40.00	0.80	40.80	14.41	39.95	0.85	40.80
DRWL-7	-0.18	26.13	1.02	27.15	0.10	26.60	0.55	27.15	0.25	26.55	0.60	27.15
DRWL-8	0.00	NP	NA	28.60	0.46	NP	NA	28.62	0.71	NP	NA	28.65
DRWL-9	1.04	26.21	2.10	28.31	1.61	24.05	4.25	28.30	1.95	23.10	5.20	28.30
DRWL-10	3.55	29.25	1.35	30.60	4.05	28.80	1.80	30.60	4.31	28.90	1.70	30.60
DRWL-11	6.13	24.11	9.04	33.15	6.73	24.95	8.20	33.15	6.91	28.55	4.60	33.15

**Notes:**

" - " indicates measurement of water level in well vault above recovery well TOC

NP indicates no DNAPL encountered during gauging efforts

NA indicates not applicable

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**FIGURE**



Figure 1  
Standard Chlorine Chemical Company  
3rd Quarter 2013 Progress Report

